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ON THE IDENTITY OF RUBUS CANADENSIS.

W. H. BLANCHARD.

IN 1753 Linnæus in his *Species Plantarum*, page 494, described as follows a *Rubus* to which he gave the specific name *Canadensis*.

6. *Rubus foliis digitatis denis quinis ternatisque, caule inermi.*
Habitat in Canada. Kalm.

Caulis subpurpureus. Foliola lanceolata, utrinque nuda, tenuissima, argute serrata. Bractæ lanceolatæ. Stipulæ lineares, acutæ.

6. *Rubus* with digitate leaves, in tens, fives, and threes, stem unarmed.

Habitat in Canada. Kalm.

Stem somewhat purple. Leaflets lanceolate, naked on either side, very thin, acutely serrate. Bracts lanceolate. Stipules linear, acute.

For a time authors of American floras included this name evidently not because they knew plants that they referred to such a species, but simply because Linnæus had described it. At length, however, it was used for the common northern edible dewberry. This usage continued till 1898 when Prof. L. H. Bailey, in his *Evolution of Our Native Fruits*, showed that the *R. Canadensis* of Linnæus was an erect, unarmed, glabrous plant. This he learned by examining the original specimens of Linnæus preserved in London.

There he found two sheets. One of these he has figured on page 383. It has on the new cane five long narrow obovate leaflets, long-pointed at each end and very much like those of *R. setosus* Bigelow. The other specimen, unfortunately, he did not figure, but he obtained a good photograph of it, which he has kindly sent to me. This appears to be identical with a plant common in all the elevated parts of Vermont and New Hampshire and not rare generally in the lower sections.

I have now pretty thoroughly explored both states and write with knowledge obtained from personal observation. Specimens of this *Rubus* have been widely distributed under the name of *R. Canadensis* by President Ezra Brainerd and Mr. W. W. Eggleston. The leaflets of this second Linnæan specimen on the new cane are also five in number, narrow, the middle one ovate with rounded base, the side ones oval or slightly ovate, and the basal ones oval. The one fruit branch has a rather short but otherwise typical raceme.

Linnæus may have had both specimens before him, when he wrote the above description, but there is positive proof that he had the latter. As Dr. Gray has pointed out in Torrey and Gray's *Flora of the United States* in his remarks on *R. Canadensis*, this latter specimen has one of its leaves pressed directly on the top of another, a leaflet covering one petiole so that the two leaves would appear to a person with poor eyesight to be one leaf with ten leaflets. Here Linnæus undoubtedly got his idea of ten leaflets. The only ternate leaves on either specimen are on the fruit branches. He could get his description of narrow leaflets, lanceolate bracts, and linear stipules from either specimen or from both of them.

This latter form, the *R. Canadensis* described by President Brainerd in *RHODORA* (2: 23) in 1900, can be found by botanists visiting the White Mountains, where it occurs in great abundance in Pinkham Notch near the entrance to Tuckerman's Ravine on the road from Jackson to Gorham. Those visiting Lake Willoughby will find that though *R. Alleghaniensis* Porter is common at West Burke, it disappears about three miles up toward the lake where *R. Canadensis* has the field to itself.

It has been to me a matter of much interest to know the situation in Canada — that part from which it is to be presumed the specimens of Linnæus were obtained. Accordingly during the last days of August and throughout September, 1907, I searched for *Rubus* in Canada. No light was obtained from examinations made during the time of the collections in Montreal and Ottawa, but near the headwaters of the Connecticut River in Vermont, New Hampshire and adjacent Canada *R. Canadensis* was abundant. On a trip from Newport, Vermont, to Quebec I found in sheltered places near large rivers some *R. Alleghaniensis* and also occasionally *R. glandicaulis* Blanchard, but the main high-bush blackberry was *R. Canadensis*, exactly the same form which we have in Vermont.

I found it around Sherbrooke, Richmond and Victoriaville, and some at Lyster, which is twenty miles southwest of Quebec. Beyond Sherbrooke all forms of *Rubus* except *R. strigosus* Michx. become rather scarce and people are not troubled with "briars." *R. strigosus*, however, I found as far north as I went. Some peculiar blackberries grew a few miles north of the citadel at Quebec but I found none there that I knew.

From Quebec I took a continuous car-ride to Roberval on Lake St. John. At Lake Edward, eighty miles north of Quebec, while the train was waiting for the hunters to get off, I found a blackberry that has considerable resemblance to the specimen of Linnæus figured by Prof. Bailey, but this was the only one I saw in Canada.

It may be of interest to botanists to know, and it was a great surprise to me to find, that on both sides of the railroad as far as one can see, from Rivière à Pierre Junction to Lake St. John, a distance of about one hundred miles, the land has been burned over so often that nothing grows there apparently except "fire-weeds." There is also a border at least thirty miles wide all around the lake that has had a similar fate. A small tract on the lake at Roberval was cleared on the occasion of the first fire and has escaped that baptism, and here I was able to learn something of the flora of this northern region. I expected to see it as Michaux saw it, and but for fires it would be nearly the same. I found no blackberries here.

At Three Rivers good *R. Canadensis* was found and also at Kазabazua, forty miles north of Ottawa, but *R. Alleghaniensis* is evidently the prevailing species of the immediate valleys of the St. Lawrence and Ottawa rivers from Three Rivers to Ottawa. Crossing into New York at Brockville at the foot of the Thousand Islands, I found very good *R. Canadensis* at Oswego on the Oswego River, and also at Rochester, and at McLean about fifteen miles northeast of Ithaca. Going through the Adirondacks I found it abundant at Fulton Chain, scattering at Saranac Lake and at Lake Placid, and quite abundant from North Elba till I began to descend into the Ausable valley in Keene.

There now seems to be no good reason to doubt that the specimen with oval-ovate leaflets which Linnæus certainly used in writing his description should be regarded as the type of the species and that we know the plant; while his specimen with cuneate leaflets was probably a sport or an intergrade, or possibly a form of limited range. Were

plants similar to this cuneate-leaved form abundant and widespread it would be more uncertain, but even in such a case the blunder of the ten leaflets ought to settle the question of which to regard as *R. Canadensis*.

There are other though probably local forms of unarmed, glabrous, high-bush blackberries. *Rubus Millspaughii* Britton is one, as I tried to show in the American Botanist, Nov., 1904, and *R. amabilis* Blanchard (RHODORA, 8: 173) is another.

R. Canadensis is never absolutely unarmed like *R. triflorus* Richardson. Even in deep shade there are a few small prickles, and in open sun they are often quite noticeable. Neither is the species often perfectly glabrous in every part, as will be seen from the description following.

RUBUS CANADENSIS L., Sp. Pl. 494 (1753). Plants large, erect, pyramidal in outline with stout furrowed stems. Glabrous or slightly pubescent, glandless. Unarmed or with few short prickles. Flowers large and showy on slender pedicels. Leaflets narrow. Fruit rather small, sour, in large, open racemes.

New canes. Stems rather strong, erect, seldom branched, recurved above, 4 to 6 ft. high, 5 to 8 ft. long, dark red, glabrous and glandless, well angled and furrowed. Prickles few, straight, small, nearly or quite wanting in shade, frequently quite noticeable in open sun, very variable; when present a true prickle, rather stout, set perpendicular to the stem and on its angles only. Leaves large, 5 to 8 in. long and wide, 5-foliate, thin, dark green and glabrous on the upper surface, bright green and glabrous or sometimes finely pubescent beneath. Leaflets narrow, long-stalked, taper-pointed, finely and doubly serrate-dentate, the middle one ovate, more than twice as long as wide, rounded at the base; the others oval and narrower in proportion, the side ones slightly rounded at the base and the basal ones cuneate. Petioles and petiolules rather stout, glabrous, nearly unarmed, the petiolule of the middle leaflet on large leaves $1\frac{1}{2}$ inches long, the side ones one-half as long and the basal leaflet short-stalked.

Old canes. Erect as ever, normally pyramidal in outline, the second year's growth consisting of racemes on the upper part of the stem and long, leafy branches resembling new canes below, generally one from each old leaf axil but often two. Axis of long leaf-branches nearly straight, terete, glabrous, generally unarmed. Leaves 3-foliate or some of the outer 5-foliate, resembling those on new canes. Racemes 4 to 7 in. long; axis nearly straight, stout, glabrous or finely pubescent, unarmed; pedicels very slender, set at a great angle to the axis and subtended by small bracts; leaves two or three, of fair size, unifoliate or trifoliate, leaflets generally narrow; flowers 10-15, appearing about the middle of June, large and showy, $1\frac{1}{4}$ to $1\frac{1}{2}$ in. broad, petals oblong,

two-thirds as wide as long; sepals reflexed. Fruit ripening after the middle of August, generally small, short, as wide as long, short-oblong, commonly rather sour.

Abundant as observed by the writer in the higher parts of Vermont and New Hampshire, and in the southeastern townships of the Province of Quebec, and at least occasional in other parts of Canada; occurring also in New York from Rochester to Lake Champlain.

This species is not entirely confined to the high sections, but is occasional near the Connecticut River especially in light shade. Here it is often slightly pubescent and is earlier than in its higher home, but the large flowers, dark green leaves, red, nearly unarmed stems, narrow leaflets and poor fruit are very noticeable. Pubescence on the under side of the leaves and on the inflorescence marks many plants where it is most at home. Some people call it the "sour blackberry" and where it is the only blackberry to be had, people seem to prefer to go without rather than gather it. Nowhere have I seen it thrive better than near the Town House in Stratton, Vt., and on the old turnpike road in the vicinity of the field now marked by a log-cabin where the famous Whig gathering on "Stratton Mountain" was held in 1840 with Daniel Webster as speaker.

The high blackberry situation in Southeastern Vermont is this: Near the Connecticut River the only high blackberry most people know is the long, aromatic *Rubus nigrobaccus* Bailey, an older name for which is *R. Alleghaniensis* Porter which must now be used. As you go west and get into more elevated sections this becomes scarce and another species *R. pergratus* Blanchard (RHODORA, 8: 96) often called the "square blackberry" is sought by berry pickers who call *R. Alleghaniensis* the "long blackberry," "sow-teat" and "sheep-teat." As you get into still higher sections this becomes scarce and *R. Canadensis* which has grown more and more plenty as you advanced has the field to itself.

WESTMINSTER, VERMONT.

THE GENUS PILINIA.

F. S. COLLINS.

Plate 77.

In a previous paper¹ the writer noted the occurrence of *Pilinia rimosa* Kütz. in Maine, and made some comparison of the species with the plant known as *Acroblaste Reinschii* Wille. There is nothing to add in regard to the former species, but observations made on forms of *Acroblaste* from various stations indicate that all can best be included under *Pilinia*, with somewhat changed definition, as follows:—

Basal layer of abundantly branched filaments, from which arise erect filaments, simple or branched, sometimes terminating in articulate hairs; chromatophore covering the cell wall; sporangia roundish, ovoid or clavate, terminal or lateral on erect filaments, or sessile on the basal layer, the contents forming numerous biciliate zoospores, which escape through an opening at the summit, development unknown.

With this extension the genus will include six American species, all marine, *P. rimosa* and *P. maritima* occurring also in Europe, the others known only in America; *P. maritima* connecting it with *Chaetophora* and originally placed in that genus by Kjellman; *P. Lunatiae* and *P. minor* at the other end coming close to *Gongrosira*. The following key may be found convenient in distinguishing the species.

KEY TO THE AMERICAN SPECIES OF PILINIA.

- | | |
|--|-----------------------|
| 1. Filaments often ending in hairs. | <i>P. maritima</i> . |
| 1. Hairs not present. | 2. |
| 2. Erect filaments short, densely packed. | 3. |
| 2. Erect filaments longer, yellowish. | 4. |
| 3. Dark green; filaments 8–12 μ diam.; on live shells. | <i>P. Lunatiae</i> . |
| 3. Yellowish green; filaments only 2–5 μ diam.; on pebbles. | <i>P. minor</i> . |
| 4. Forming a rather firm, spongy coating on woodwork. | <i>P. rimosa</i> . |
| 4. Forming a thin, soft coating. | 5. |
| 5. On shells, pebbles, etc.; sporangia on erect filaments. | <i>P. Reinschii</i> . |
| 5. On woodwork; sporangia on basal layer, rarely lateral on erect filaments. | <i>P. Morsei</i> . |

¹Collins, Notes on New England Algae, RHODORA, Vol. V, p. 207, 1903.

The genus *Acroblaste* was founded on material from Buzzards' Bay,¹ but no specific name was given; it was left in the unsatisfactory form *Acroblaste* spec., but with sufficient description and good figures. Wille² gave it the name *Acroblaste Reinschii*. There appears to have been no farther report of its occurrence in southern New England, but when a somewhat similar form was found at Revere Beach, Massachusetts, it was identified by the writer with Reinsch's plant, and was distributed under Wille's name as P.B.-A., No. 162. This plant, which was found only on the shells of *Lunatia heros* Adams, differed somewhat from Reinsch's description, but in the absence of any specimens, it was impossible to determine how much variation should be allowed for. Within the last two years the writer has found a plant at Mattapoisett, Wood's Hole and Eastham, all in southern Massachusetts, all agreeing with each other and with Reinsch's description and figures, without any tendency in the direction of the differences shown by the Revere Beach plant. The latter has, moreover, been collected at all seasons of the year, and in no instance did it come any nearer to the southern form. Under these circumstances it seems best to consider it distinct, and to characterize it as follows:—

P. Lunatiae n. sp. *Acroblaste Reinschii* Collins, List, RHODORA, Vol. II, p. 43, 1900, as to northern Massachusetts localities only; Collins, Holden & Setchell, P. B.-A., No. 162, 1896. Filamentis basalaribus mox in stratum subparenchymaticum concretis, cellulis forma ac magnitudine variantibus, rotundatis vel angularibus, ad 15 μ diam.; filamentis erectis 8–12 μ diam., superne incrassatis, plerumque 5–6-cellularibus, rarissime usque ad 10-cellularibus, dense stipatis, ramificatione densa; cellulis ejusdem filamenti variantibus quoad formam et magnitudinem; sporagio e cellula terminali formato, a cellulis ceteris parum diverso; colore viridi intenso.

Basal filaments soon becoming united into a subparenchymatous layer, cells of varying shape and size, roundish or angular, up to 15 μ diam.; erect filaments 8–12 μ diam., increasing in size upward, usually 5–6 cells in length, quite rarely up to 10 cells, densely branched and very compact, cells varying in size and shape in the same filament; terminal cell becoming the sporangium, differing but little from any other cell of the filament; color deep green. On live shells of *Lunatia heros* Adams, Revere Beach, Massachusetts.

¹ Reinsch, Bot. Zeit., Vol. XXXVII, p. 361, Pl. III. A, 1878.

² Engler & Prantl, Nat. Pflanzenfam., Algen, p. 97, 1890.

This plant is common on the *Lunatia* shells at Revere Beach, so much so that in spring and early summer it is the exception to find a live shell free from it, and at all times it is to be found plentifully. It appears to die with the host, for it has never been found on dead shells. Its distribution seems to be very limited, as there is no record of its occurrence except at this one station, though the *Lunatia* is found all along the coast, and the alga has been sought for carefully on the Maine coast and in southern New England. It always occurs on the spire of the shell, which in the genus is quite flat; here it forms a roundish patch, thickest at the centre, the tip of the spire, and has never been known to cover more than a quarter of the surface of the shell. The color is a deep rich green, an unusual color in this genus, where a yellowish color is general. The substance is dense, and it is only by crushing or dissection that the structure can be made out. The basal layer is largely continuous, the filaments showing distinctly only at the edges; the erect filaments are short, stout, and of cells usually quite irregular in shape; they increase in size upward, but rather irregularly, the terminal cell being the largest, with a broad rounded top, but not differing otherwise from any other cell of the filament; the spores escape through an opening in the summit, as in other species. The general appearance is rather that of *Gongrosira* than of *Pilinia*.

P. MINOR Hansgirg in Foslie, Contribution to Knowledge of the Marine Algae of Norway, Tromsø Museums Aarshefter, XIII, p. 146, Pl. II, figs. 17-22, 1890. Stratum thin-coriaceous or almost crustaceous, yellow green, more or less extended. Filaments generally short and little branched. Vegetative cells 3-5 μ wide, 1-2 times as long, end cells rounded; in each cell a parietal band-shaped chromatophore. Prof. N. Wille of Christiana has kindly determined the American plant as belonging to the species of Hansgirg, of whose original description the foregoing is a translation. Our plant, however, seems to be more fully developed, so that a more complete account is now possible. There is little distinction between horizontal and erect filaments; near the substratum there is a densely packed cellular mass, in which it is difficult or impossible to distinguish filamentous structure; above this short filaments are easily made out, but they are not uniformly vertical, and they are quite irregular in size and shape of the cells. The latter may be cylindrical, as little as 2 μ diam., but are usually larger and not much longer than broad, ovoid or even subspherical;

the cells in a filament increase in diameter from the base to the summit, and may reach 6 or 7 μ diam. When the terminal cell changes to a sporangium, the size is still greater; the normal form of a sporangium seems to be pyriform, and the size $20-24 \times 10-12 \mu$, but various irregular forms are common. The distinction between basal and erect filaments is less than in *P. Lunatae*, but the sporangia are more clearly differentiated. It was found on pebbles on the shore of the "Salt Pond," Eastham, Massachusetts, July, 1907. The pebbles were between high and low tide marks, and when the tide was out were wet with cold fresh water from a spring.

P. Reinsehii (Wille) nov. comb. *Acroblaste* spec. Reinsch, Bot. Zeit., Vol. XXXVII, p. 361, Pl. III. A, 1878; *A. Reinschii* Wille in Engler & Prantl, Nat. Pflanzenfam., Algen, p. 97, 1890; Collins, List, RHODORA, Vol. II, p. 43, 1900, as to southern Massachusetts localities only; not Collins, Holden & Setchell, P. B.-A., No. 162, 1896. In this species the basal layer shows the filamentous character throughout, even when the filaments are laterally united; often they remain practically free. The erect filaments are 5-8 μ diam., and may reach a length of 400 or 500 μ ; they are regularly cylindrical except for a slight constriction at the nodes, or less commonly increase in size very slightly upwards; in either case the terminal sporangium is sharply differentiated from the other cells, ovoid or oblong, 16-18 μ diam. Sometimes the erect filaments are simple, and it is only in such cases that the upper cells are larger than the lower; the difference is slight, in any case. Ordinarily the filaments are more or less freely branched, and of the same size throughout. The sporangia are terminal on the main filament or on longer or shorter branches; in some cases a branch is developed from the cell below a sporangium, pushing the latter to one side, so that it appears to be a lateral growth. The spores escape through a terminal opening in the sporangium, almost as large as its diameter; after their escape the filament may resume its growth, coming up through the persistent empty sporangium. It is not uncommon to find several empty shells at different heights on a long filament. The color is a yellowish, somewhat olivaceous green; Reinsch notes its resemblance to small species of *Ectocarpus*. He found it growing on shells of a species of *Turritella*, which it covers with a dense coating; and also on pebbles, both between tides and in shallow water. The writer has found it on other shells, and also on the claws of the spider crab, *Libinia canali-*

culata Say. It is often mixed with *Microchaete grisea* Thuret, *Calothrix* species, and other small algae.

P. RIMOSA Kützing, Phyc. Gen., p. 273, 1843; Collins, RHODORA, Vol. V. p. 207, 1903; Collins, Holden & Setchell, P. B.-A., No. 971, 1902. There is nothing to add to what was given in the writer's note on the first occurrence in America; no other locality has been reported.

P. Morsei n. sp. Filamentis basilaribus irregulariter contortis, plus minusve concretis, cellulis rotundatis, 8-15 μ diam., saepe longitudinaliter divis, membranam subparenchymaticam bi-polystromaticam formantibus; filamentis erectis ad 2 mm. altis, 7-11 μ diam.; cellulis 1-2 diam. longis, cylindricis vel leviter moniliformibus; sporangiis ovoideis vel pyriformibus, stratum basale insidentibus, sessilibus vel ad pedicellum paucicellulare.

Basal filaments irregularly contorted, more or less united; cells rounded, 8-15 μ diam., often divided longitudinally and forming a subparenchymatous membrane of two or more layers; erect filaments up to 2 mm. high, 7-11 μ diam., cells 1-2 diam. long, cylindrical or slightly moniform; sporangia ovoid or pyriform, on the basal layer, sessile or on a few-celled pedicel. On woodwork, Atlantic City, New Jersey, Prof. S. R. Morse.

In this species there seems to be a differentiation between the fertile and the assimilative growths from the basal layer; the former are short, in many cases nothing but the sporangium itself; the latter are longer than in any other species of the genus. After a sporangium is emptied another may be produced by the same filament, but while in *P. Reinschii* the sporangia are at considerable intervals on a long filament, in *P. Morsei* they are "nested," usually only a single cell being produced to support the new sporangium. The cells of the basal filaments divide longitudinally, by a plane approximately parallel to the substratum. The color is yellowish. The writer takes pleasure in giving to this species the name of Prof. Silas Rutilus Morse of the New Jersey State Museum, who first called his attention to it, and to whom we are indebted for much of our knowledge of the algae of the New Jersey coast.

P. MARITIMA (Kjellm.) Rosenvinge, Grønlands Havalger, p. 933, fig. 43, 1893; *Chaetophora maritima* Kjellman, Spetsbergens Alger p. 51, Pl. IV, figs. 15-16, 1877. Frond subspherical, 1-3 mm. diam., with basal layer not strongly developed; erect filaments 6-10 μ diam.,

cells about as long as broad, terminating in articulate hairs or ovoid-elliptic cells; sporangia terminal, clavate, $11-12 \times 16-21 \mu$; color green. Greenland.

This species indicates the connection between *Pilinia* and *Chaetophora*; instead of an extended layer it forms roundish gelatinous thalli, forming, with *Calothrix* species, etc., a continuous stratum near high water mark. In 1884 the writer reported¹ its occurrence at Kennebunkport, Maine, but it has not since been seen, and subsequent examination of the material in question failed to show it, so that the report is now unconfirmed by any specimen. There is no reason, however, why it should not be found on the Maine coast, in company with other arctic forms.

MALDEN, MASSACHUSETTS.

EXPLANATION OF PLATE 77.

- Fig. 1. *Pilinia Lunatiae*, portion of basal layer.
Fig. 2. " " two erect filaments with branches.
Fig. 3. " " filament with emptied sporangium.
Fig. 4. *P. Morsei*, section of basal layer with cells longitudinally divided, and two erect filaments.
Fig. 5. *P. Morsei*, basal layer more developed, with long and short filaments and new and old sporangia.
Fig. 6. *P. Morsei*, successive sporangia on short filament.

ACHILLEA TOMENTOSA AT WESTFORD, MASSACHUSETTS.— Between 1884 and 1888 I found at Westford, a striking yellow-flowered species of yarrow, since identified as *Achillea tomentosa* L., a native of southern and central Europe. It was in a field with other plants, introduced through the generous use of wool waste as a fertilizer. Some of the *Achillea* was transplanted to a private garden, where it still persists after twenty years, though in the field where it originally grew it has disappeared. As now applied the wool waste is kept until it decomposes sufficiently to kill the weed seeds it so often contains — a procedure more favorable to good agriculture than productive of botanical rarities.— EMILY F. FLETCHER, Westford, Massachusetts.

¹ Bull. Torrey Bot. Club, Vol. XI, p. 130.

REPORTS ON THE FLORA OF THE BOSTON
DISTRICT.—III.

IN preparing this list of the *Liliaceae* it has seemed best to the Committee to omit several introduced species that are mentioned in some of our local floras. In most cases this is because no records of existing specimens have been received, while the few definite records that do exist, indicate that such plants are merely persistent and not spreading.

The plants introduced around Concord by the late Minot Pratt have thus been purposely omitted. In fact, only one herbarium specimen of the *Liliaceae* has been reported, and that plant, *Trillium grandiflorum* Salisb., is gradually losing ground. Persons interested are referred to the lists published by the late Alfred W. Hosmer, in RHODORA i, September, 1899. These records of nine years ago, without recent reports, do not seem to the Committee sufficient to entitle any of these species to a place here.

LILIACEAE.

VERATRUM.

V. viride Ait. Wet woods and meadows; very abundant north and west of Boston, but not reported south of the Blue Hills.

UVULARIA.

U. perfoliata L. Leaf-mould soil in open deciduous woods; occasional.

OAKESIA.

O. sessilifolia (L.) Watson. Moist open woods, common.

ALLIUM.

A. tricoccum Ait. Rich woods; Andover, locally abundant; Framingham, rare; Waltham, very abundant in one station.

A. canadense L. Moist open woods and meadows, frequent; not reported south of Needham.

A. VINEALE L. Waste and cultivated ground, a rare weed; Cambridge (Botanic Garden), Milton, Woburn.

A. SCHOENOPRASUM L. Sparingly introduced in Essex county; Georgetown (*Mrs. C. N. S. Horner*).

HEMEROCALLIS.

H. FULVA L. Persistent and spreading around old dwellings; common, but seldom collected.

LILIUM.

L. philadelphicum L. Open woods and fields in rather dry soil; common throughout.

L. canadense L. Meadows, frequent.

L. TIGRINUM Ker. Persistent and spreading about house-sites; occasional.

ERYTHRONIUM.

E. americanum Ker. Moist deciduous woods; common in Essex county, occasional elsewhere.

SCILLA.

S. SIBIRICA Andr. Ballast near Parker St., Cambridge (*M. L. Fernald*, May 16, 1901); damp meadow, station spreading, Concord (*E. F. Williams*).

ORNITHOGALUM.

O. UMBELLATUM L. Moist fields, a frequent escape from gardens.

MUSCARI.

M. BOTRYOIDES (L.) Mill. Essex Co. (*Wm. Oakes*, 1817); in oak woods, Putnamville, Danvers, covering a patch three or four yards square (*J. Robinson*, May 22, 1879); North Andover (*H. C. Sargent & C. H. Morss*, May 1, 1885).

ASPARAGUS.

A. OFFICINALIS L. Fields and roadsides, common.

CLINTONIA.

C. borealis (Ait.) Raf. Rich woods, locally abundant.

SMILACINA.

S. racemosa (L.) Desf. Deciduous woods, very common.

S. stellata (L.) Desf. Sandy soil and wet meadows, occasional.

S. trifolia (L.) Desf. Cold bogs and cedar swamps, rare.

STREPTOPUS.

S. roseus, Michx. Rich woods, Newburyport (*Edward Moulton*, May 20, 1887); Rockport (*Mrs. Ann Babson*, 1866); also near Hospital Point, Beverly (*J. H. Sears*).

MAIANTHEMUM.

M. canadense Desf. Woods, common throughout.

POLYGONATUM.

P. GIGANTEUM Dietr. Escaped, Cambridge (*J. M. Hunnewell*, 1898); roadside, introduced in tall grass, and apparently well established, Woburn (*A. S. Pease & A. H. Moore*).

P. biflorum (Walt.) Ell. Moist deciduous woods, common.

CONVALLARIA.

C. MAJALIS L. Well established in Franklin (*E. F. Williams*) and Watertown (*M. L. Fernald*); also in Danvers and Salem (*J. Robinson*), Wakefield (*F. S. Collins*), Woburn (*A. H. Moore*).

MEDEOLA.

M. virginiana L. Rich deciduous woods, common.

TRILLIUM.

T. erectum L. Rich woods, occasional in Essex county; Milton, "doubtless introduced" (*C. H. Morss*).

T. cernuum L. Damp woods, common throughout.

T. undulatum Willd. (*T. erythrocarpum* Michx.) Rich woods, rare.

ALETRIS.

A. farinosa L. Sandy roadside, common, Bridgewater (*J. A. Cushman*); formerly in Needham, but exterminated in 1885 (*T. O. Fuller*).

SMILAX.

S. herbacea L. Moist fields and open woods; fairly common, but not reported south of the Blue Hills.

S. rotundifolia L. Woods, very common; more luxuriant in moist situations.

S. glauca Walt. Dry thickets and railroad embankments; Dedham, Hanson, Milton, Roxbury, Weston, Westwood.

C. H. KNOWLTON
J. A. CUSHMAN
WALTER DEANE
A. K. HARRISON

} Committee on
Local Flora.

NOTE ON WEIGELA ROSEA.

MARY F. PEIRCE.

THERE is a small gland at the base of the blossom of *Weigela rosea*. I knew this forty years ago; but had entirely forgotten it, until, in looking over some old letters a short time ago, I discovered one from a pupil of mine, the niece of Dr. Asa Gray. This reads as follows.—

"I showed Uncle Gray the little gland in *Weigela rosea*. He had

not noticed it before and can not account for it. He can not tell why there is but one, or in fact why it should be there at all. I presume that he will look it up and thanks to you, it will appear in the next Botany.

Yours ever,

ALICE A. GRAY. 

Botanic Garden,
June 28th 1867."

On making inquiry at the Botanic Garden, Cambridge, a few days ago, I could not find that Dr. Gray had made any record of the study of the point called to his attention. The *Weigela* is a foreign shrub and therefore has not been included in the Flora of this country.

The gland is small, oblong, and green in a fresh blossom. It lies within and at the base of the monopetalous corolla. It is close to the base of the style, but forms no part of it. It seems to secrete a honey-like substance. The style is very lightly attached to the ovary (which lies below the calyx) and is easily separated from it in the attempt to open the blossom. This makes it easy to mistake the gland for the ovary.

Has this been noticed in any magazine or paper, or has any one attempted to explain its use? After forty-one years of waiting, I should be glad to learn something more about it.

WESTON, MASSACHUSETTS.

[In a search, necessarily hurried, we find the following references to the structure in question: 1) Eichler, Blüthendiagramme, i. 267, where it is mentioned as an anteriorly placed glandular outgrowth of the disk, its position being shown in figure 142 E on page 265. 2) Knuth, Handbook of Flower Pollination (J. R. Ainsworth's translation), ii. 525, where under *Weigela* it is stated that the nectar is "secreted by a green swelling between the base of the style and the corolla." The structure has been examined in fresh material and we are inclined to agree with the authors cited, in believing it to be an elevated outgrowth of the disk, modified to secrete nectar and attract insects, which effect cross-pollination.—Ed.]

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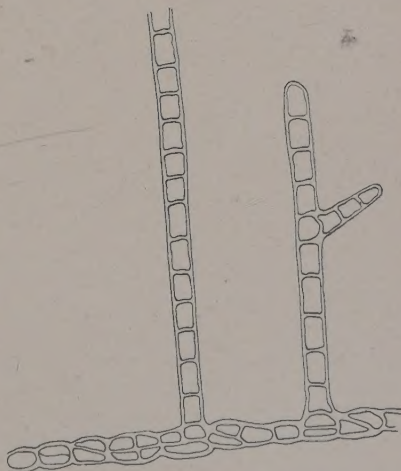
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4

F. S. Collins ad nat. del.

Figs. 1-3, *PILINIA LUNATIAE*. Figs. 4-6, *P. MORSEI*.

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